

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES  
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges Eigentum  
Internationales Büro



(43) Internationales Veröffentlichungsdatum  
7. Juli 2005 (07.07.2005)

PCT

(10) Internationale Veröffentlichungsnummer  
WO 2005/061233 A1

(51) Internationale Patentklassifikation<sup>7</sup>: B41C 1/05, B23K 26/14

(21) Internationales Aktenzeichen: PCT/EP2004/004789

(22) Internationales Anmeldedatum:  
5. Mai 2004 (05.05.2004)

(25) Einreichungssprache: Deutsch

(26) Veröffentlichungssprache: Deutsch

(30) Angaben zur Priorität:  
103 55 996.5 27. November 2003 (27.11.2003) DE

(71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von  
US): STORK PRINTS AUSTRIA GMBH [AT/AT]; Kuf-  
steiner Strasse 4, A-6336 Langkampfen (AT).

(72) Erfinder; und

(75) Erfinder/Anmelder (nur für US): KRUCKENHAUSER,  
Klaus [AT/AT]; Quellenweg 1, A-6336 Langkampfen  
(AT). JUFFINGER, Josef [AT/AT]; Grub 23, A-6335  
Thiersee (AT).

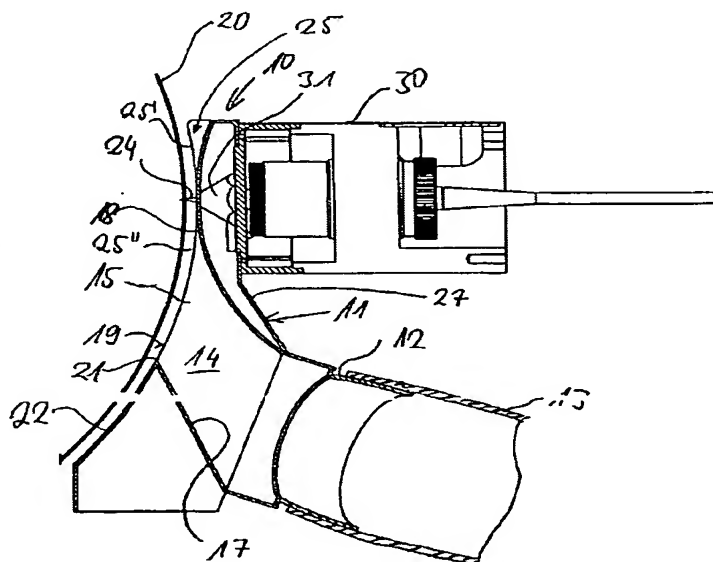
(74) Anwalt: WAGNER, Bernhard, Peter; Ter Meer, Stein-  
meister & Partner GbR, Mauerkircherstrasse 45, 81679  
München (DE).

(81) Bestimmungsstaaten (soweit nicht anders angegeben, für  
jede verfügbare nationale Schutzrechtsart): AE, AG, AL,  
AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,  
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

[Fortsetzung auf der nächsten Seite]

(54) Title: VACUUM UNIT FOR A DEVICE USED TO STRUCTURE THE SURFACE OF A WORKPIECE BY MEANS OF  
RADIATION

(54) Bezeichnung: ABSAUGEINRICHTUNG FÜR EINE VORRICHTUNG ZUM STRUKTURIEREN EINER OBERFLÄCHE  
EINES WERKSTÜCKS MITTELS STRAHLUNG



(57) Abstract: The invention relates to a vacuum unit for a device used to structure the surface of a workpiece (20), in particular a plate such as e.g. a flexographic printing block, by means of radiation and especially laser radiation. Said unit comprises a hood (10), which in its operating position covers an interaction zone between the radiation and the surface of the workpiece, consisting of a rear face (11), to which a vacuum line (38) can be connected, two lateral walls (16) comprising end edges (19), which lie opposite the workpiece (20) in the operating position of the hood (10), and two leading walls (17, 18), which are located between the lateral walls (16), run transversally to the latter and which together with the two lateral walls (16) delimit a vacuum channel (14) in the hood (10), said channel comprising an inlet (15), which lies opposite the workpiece (20) in the operating position of said hood (10). The aim of the invention is to provide a vacuum unit of the aforementioned type, which permits abraded or decomposition products that form

during the engraving process, such as aerosols, water vapour and fumes, in addition to centrifugal particles, to be reliably removed from the interaction zone between the laser beam and the workpiece, thus practically eliminating a build-up of said products on the workpiece and/or vacuum unit. To achieve this, the edge (21) of one (17) of the two leading walls lies opposite the workpiece in the operating position of the hood (10), whilst the other leading wall (18) comprises a convex, cylindrical curvature lying opposite the surface of the workpiece in the operating position of the hood and, in the vicinity of the curvature, at least one opening (23), through which the radiation for engraving the workpiece surface is guided.

[Fortsetzung auf der nächsten Seite]